10

14

Inputs 12 Outputs

15

Fixed
Inputs

Fixed
Outputs

17

1 2 3 4

1 2 3 4

**Crosspoint
Matrix
8 x 8**

5 6 7 8

5 6 7 8

S5

S6

S7

S8

16

Switchable
Inputs/Outputs

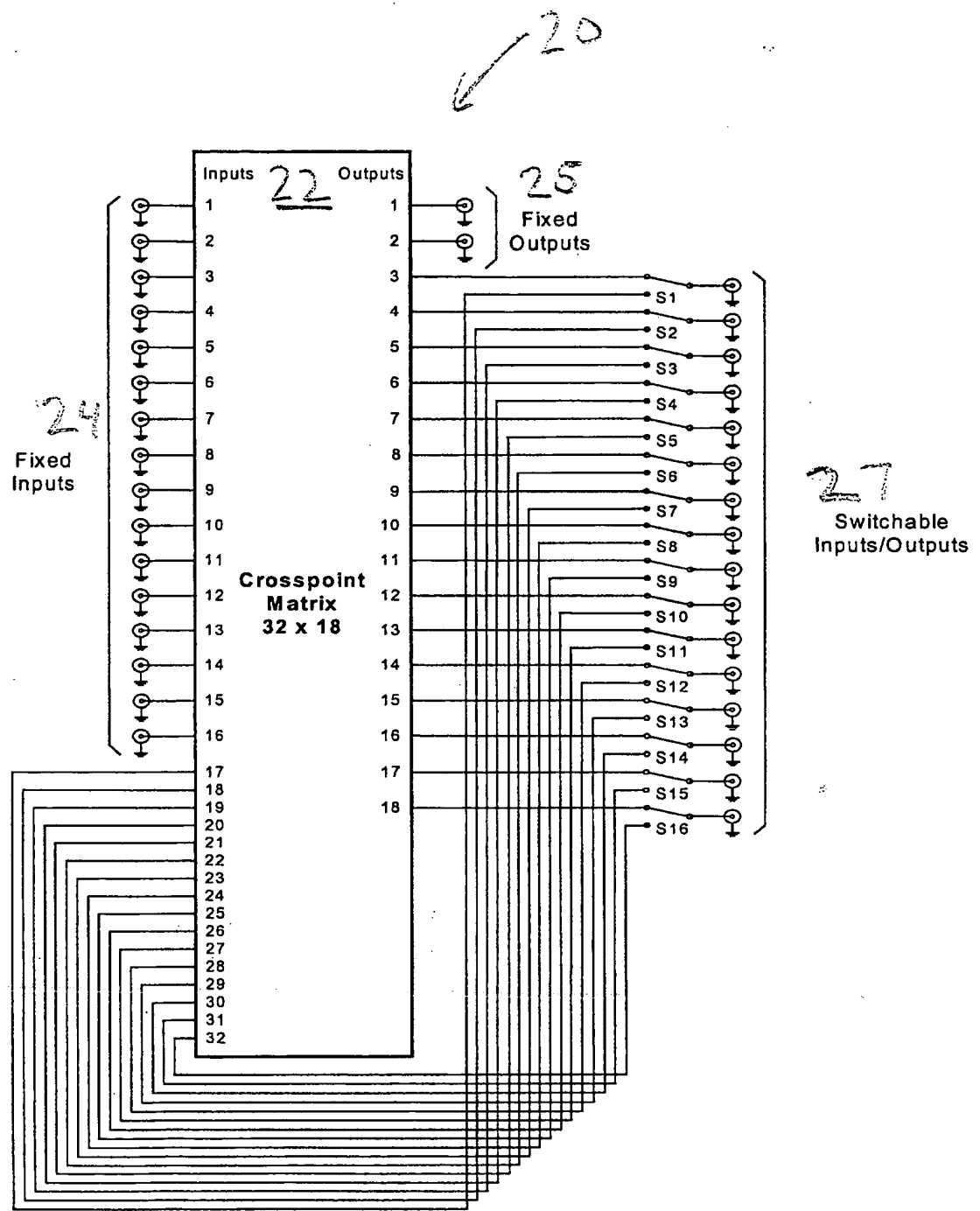**Fig 1: Routing Switcher with variable input/output architecture**

FIGURE 1

Fig 2: Larger Routing Switcher with variable input/output architecture
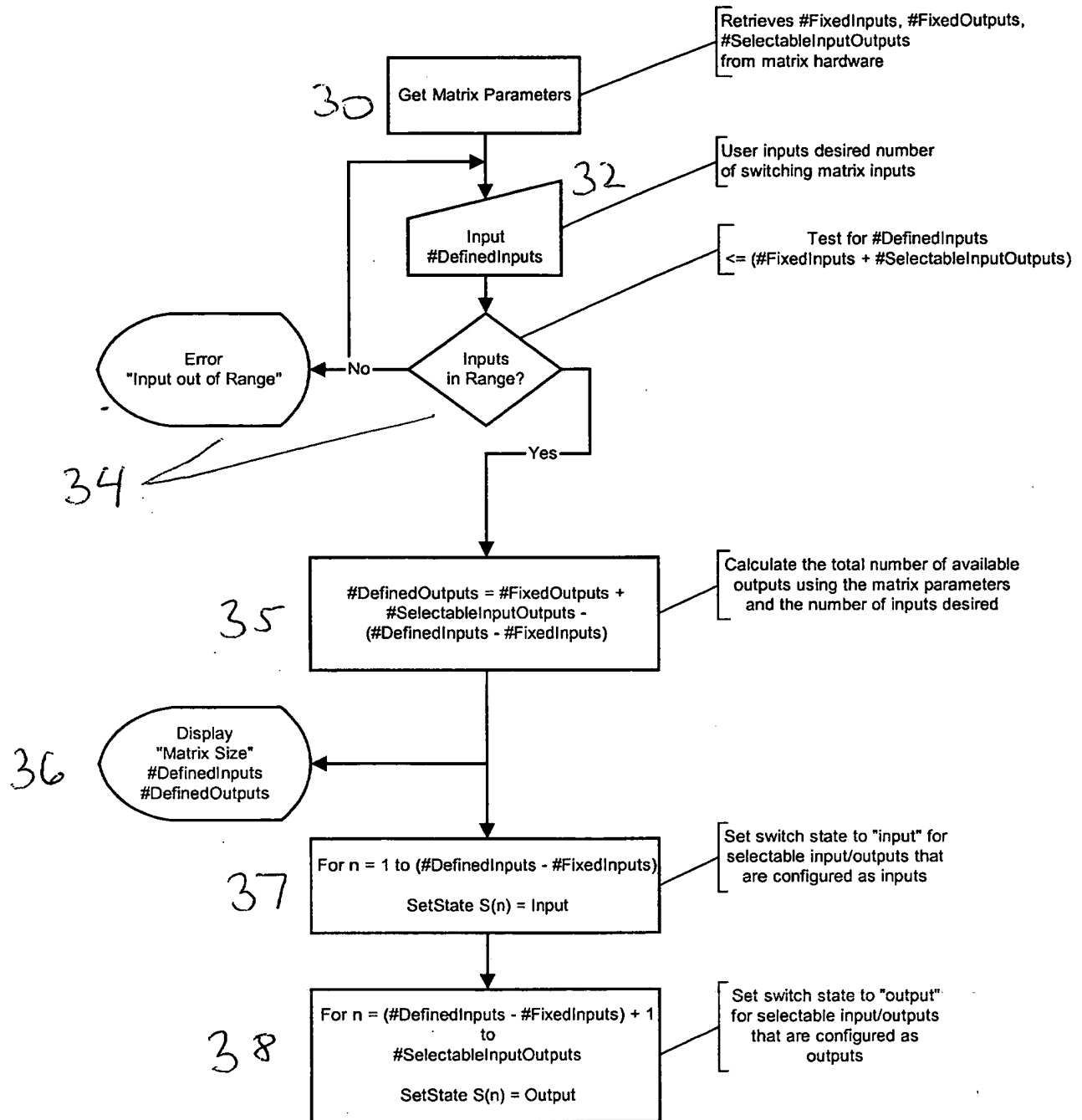
FIGURE 2

Flowchart:

30 → Get Matrix Parameters ─── Retrieves #FixedInputs, #FixedOutputs, #SelectableInputOutputs from matrix hardware

32 Input #DefinedInputs ─── User inputs desired number of switching matrix inputs

Test for #DefinedInputs <= (#FixedInputs + #SelectableInputOutputs)

Inputs in Range? ──No──> Error "Input out of Range"

34

──Yes──>

35 #DefinedOutputs = #FixedOutputs + #SelectableInputOutputs - (#DefinedInputs - #FixedInputs) ─── Calculate the total number of available outputs using the matrix parameters and the number of inputs desired

36 Display "Matrix Size" #DefinedInputs #DefinedOutputs

37 For n = 1 to (#DefinedInputs - #FixedInputs) SetState S(n) = Input ─── Set switch state to "input" for selectable input/outputs that are configured as inputs

38 For n = (#DefinedInputs - #FixedInputs) + 1 to #SelectableInputOutputs SetState S(n) = Output ─── Set switch state to "output" for selectable input/outputs that are configured as outputs

FIGURE 3